

We Claim as Our Invention:

1. A signal transmission device for transmitting signals through a transmission line formed of both a plurality of serial buses of a first transmission speed and a serial bus of a second transmission speed, comprising:

a first communication part for transmitting at least one signal through the plurality of serial buses at the first transmission speed; and

a second communication part for transmitting a signal through the serial bus at the second transmission speed;

wherein the second communication part controls a signal transmitting operation of the first communication part based on a result of communications through the serial bus of the second transmission speed.

2. A signal transmission device as claimed in claim 1, wherein signal transmitting directions of the plurality of serial buses of the first transmission speed are independently set by the first communication part based on the result of the communications by the second communication part.

3. A signal transmission device as claimed in claim 1, wherein the first communication part transmits the at least one signal by using the plurality of serial buses of the first transmission speed independently in accordance with kinds of the signals to be transmitted.

4. A signal transmission device as claimed in claim 3, wherein the first communication part transmits both a picture signal and a signal different from the picture signal through different ones of the serial buses of the first transmission speed.

5. A signal transmission device as claimed in claim 1, wherein the first communication part transmits a plurality of kinds of signals using the serial buses of the first transmission speed in time division fashion.

6. A signal transmission device as claimed in claim 5, wherein the first communication part transmits a picture signal through the serial buses of the first transmission speed, and transmits a sound signal by utilizing a blanking period of the picture signal.

7. A signal transmission device as claimed in claim 1, further comprising:
a plurality of the first communication parts and a plurality of the second communication parts, wherein the signals are permitted to be transmitted through a plurality of the transmission lines.

8. A signal transmission device as claimed in claim 1, wherein the second communication part decides that an opposite signal transmission device has a signal recording function, based on the result of the communications, and inhibits a communicating operation of the first communication part when a content to be transmitted has its duplication prohibited by a copyright protection.

9. A signal transmission method, comprising the steps of:
preparing at least two signal transmission devices, each transmission device including both a first communication part for transmitting at least one signal through a plurality of serial buses of a first transmission speed and a second communication part for transmitting a signal through a serial bus of a second transmission speed;
disposing the at least two signal transmission devices on respective terminal sides of a transmission line which is formed of a plurality of serial buses of the first transmission speed and the serial bus of the second transmission speed; and
controlling a signal transmitting operation through the serial bus of the first transmission speed, based on a result of communications through the serial bus of the second transmission speed.

10. A signal transmission method as claimed in claim 9, wherein signal transmitting directions in the signal transmitting operations through the plurality of

serial buses of the first transmission speed are set independently for the respective serial buses of the first transmission speed, based on the result of the communications through the serial bus of the second transmission speed.

5 11. A signal transmission method as claimed in claim 9, wherein the plurality of serial buses of the first transmission speed are used independently in accordance with kinds of signals to be transmitted.

10 12. A signal transmission method as claimed in claim 11, further comprising the step of:
 transmitting both a picture signal and a signal different from the picture signal through the plurality of serial buses of the first transmission speed.

15 13. A signal transmission method as claimed in claim 9, the method further comprising the step of:
 transmitting a plurality of kinds of signals using the plurality of serial buses of the first transmission speed in time division fashion.

20 14. A signal transmission method as claimed in claim 13, the method further comprising the steps of:
 transmitting a picture signal through the plurality of serial buses of the first transmission speed; and
 transmitting a sound signal by utilizing a blanking period of the picture signal.

25 15. A signal transmission method as claimed in claim 9, wherein each of the at least two signal transmission devices is provided with both a plurality of the first communication parts and a plurality of the second communication parts, and the signals are transmitted through a plurality of the transmission lines.

30 16. A signal transmission method as claimed in claim 9, wherein, in a case where the signal to be transmitted by one of the at least two signal transmission

devices through the serial buses of the first transmission speed includes content protected by a copyright, the transmission of the signal of the content is inhibited when the other of the at least two signal transmission devices has a signal recording function based on the result of the communications through the serial bus of the second transmission speed.

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